CLAIMS

In the claims:

1. (currently amended) A liquid electrophotographic toner composition comprising:

a) a liquid carrier having a Kauri-Butanol number less than about 30 mL; and

b) a plurality of toner particles dispersed in the liquid carrier, wherein the toner particles comprise at least one visual enhancement additive dispersed and encapsulated within an amphipathic copolymer, wherein the amphipathic copolymer comprises one or more S portions and one or more D portions.

2. (original) The liquid electrophotographic toner composition according to claim 1, wherein said at least one visual enhancement additive is a pigment.

3. (original) The liquid electrophotographic toner composition according to claim 1, wherein said amphipathic copolymer is a graft copolymer.

4. (original) The liquid electrophotographic toner composition according to claim 1, wherein said particle has a volume mean particle diameter of about 1 μm to about 9 μm, and a number mean particle diameter of about 0.1 μm to about 4 μm.

5. (original) The liquid electrographic toner composition according to claim 1, wherein said particle has a volume mean particle diameter of about 2 μm to about 7 μm, and a number mean particle diameter of about 0.5 μm to about 3 μm.

6. (original) The liquid electrographic toner composition according to claim 1, wherein the weight ratio of amphipathic copolymer to visual enhancement additive is from about 2:1 to about 18:1.

7. (original) The liquid electrographic toner composition according to claim 1, wherein the weight ratio of amphipathic copolymer to visual enhancement additive is from about 4:1 to about 14:1.

8. (original) The liquid electrographic toner composition according to claim 1, wherein the weight ratio of amphipathic copolymer to visual enhancement additive is from about 8:1 to about 12:1.

9. (original) The liquid electrographic toner composition according to claim 1, wherein the copolymer has a T_g calculated using the Fox equation of about 0°-100°C.

10. (original) The liquid electrographic toner composition according to claim 1, wherein the copolymer has a T_g calculated using the Fox equation of about 20°-80°C

11. (original) The liquid electrographic toner composition according to claim 1, wherein the copolymer has a T_g calculated using the Fox equation of about 45°-75°C.

12. (original) The liquid electrographic toner composition according to claim 1, wherein the S portion has a glass transition temperature calculated using the Fox equation of from about –70 to about 125°C.

13. (original) The liquid electrographic toner composition according to claim 1, wherein the S portion has a glass transition temperature calculated using the Fox equation of from about 0 to about 100°C.

14. (original) The liquid electrographic toner composition according to claim 1, wherein the S portion has a glass transition temperature calculated using the Fox equation of from about 25 to about 75°C.

15. (original) The liquid electrographic toner composition according to claim 1, wherein the S portion of the copolymer has a T_g that is lower than the T_g of the D portion of the copolymer.

16. (original) The liquid electrographic toner composition according to claim 1, wherein said D portion has a glass transition temperature calculated using the Fox equation of about 20° to about 125°C.

17. (original) The liquid electrographic toner composition according to claim 1, wherein said D portion has a glass transition temperature calculated using the Fox equation of about 30° to about 85°C,

18. (original) The liquid electrographic toner composition according to claim 1, wherein said D portion has a glass transition temperature calculated using the Fox equation of about 50° to about 75°C.

19. (original) The liquid electrographic toner composition according to claim 1, wherein at least about 75% of the S portion (excluding grafting site components) is derived from ingredients selected from the group consisting of C1 to C24 (meth)acrylates, trimethyl cyclohexyl methacrylate, t-butyl methacrylate, isobornyl (meth)acrylate, and combinations thereof.

20. (original) A method of making a liquid electrographic toner composition, comprising the steps of:

a) dispersing a visual enhancement additive in a composition comprising S portion prepolymer and a solvent; and

b) conducting a dispersion polymerization by reacting D portion materials with the S portion prepolymer to form an amphipathic copolymer, thereby encapsulating the visual enhancement additive within a layer of amphipathic copolymer to form encapsulated pigmented organosol particles.

21. (original) The method of claim 20, further comprising blending the encapsulated pigmented organosol particles with a toner additive.

22. (original) The method of claim 20, further comprising dispersing a toner additive in the visual enhancement additive/S portion prepolymer/solvent composition.

23. (original) The method of claim 21, wherein the toner additive comprises at least one charge control agent.

24. (original) The method of claim 20, wherein the S portion prepolymer is provided by a method comprising the steps of:

a) providing a plurality of free radically polymerizable monomers, wherein at least one of the monomers comprises hydroxyl functionality;

b) free radically polymerizing the monomers in a solvent to form a hydroxyl functional polymer, wherein the monomers and the hydroxyl functional polymer are soluble in the solvent; and

c) reacting a compound having NCO functionality and free radically polymerizable functionality with the hydroxyl functional polymer under conditions such that at least a portion of the NCO functionality of the compound reacts with at least a portion of the hydroxyl functionality of the polymer to form one or more urethane linkages by which the compound is linked to the polymer, thereby providing a polymer with pendant free radically polymerizable functionality.

25. (original) The method of claim 20, wherein the solvent is a nonaqueous liquid having a Kauri-butanol number less than 30 ml.

26. (original) The method of claim 20, wherein the solvent is not a nonaqueous liquid having a Kauri-butanol number less than 30 ml, and the solvent is exchanged with a solvent that is a nonaqueous liquid having a Kauri-butanol number less than 30 ml after formation of the encapsulated pigmented organosol particles.

27. (original) The method of claim 20, wherein the D materials comprise one or more free radically polymerizable monomers wherein the polymeric material derived from ingredients comprising the one or more free radically polymerizable monomers is insoluble in the solvent.

28. (original) The method of claim 20, wherein the weight ratio of amphipathic copolymer to visual enhancement additive is from about 2:1 to about 18:1.

29. (original) The method of claim 20, wherein said S portion has a glass transition temperature calculated using the Fox equation of from about –70 to about 125°C.

30. (original) The product made by the process of claim 20.

31. (currently amended) A method of electrographically forming an image on a substrate surface, comprising the steps of:

a) providing a liquid toner composition of claim 1; ~~and~~

b) providing a chargeable substrate; ~~causing an image comprising the toner particles to be formed on the substrate surface~~

c) placing a charge onto the chargeable substrate in selected areas of the substrate to form a charge image;

d) applying the liquid toner to the charge image to provide a toned image; and

e) fixing the toned image.

32. (currently amended) A method of electrographically forming an image on a substrate surface,

comprising the steps of:

a) providing a liquid toner composition of claim 1; ~~and~~

b) providing a chargeable substrate; ~~causing an image comprising the toner particles to be formed on a charged surface; and~~

c) placing a charge onto the chargeable substrate in selected areas of the chargeable substrate to form a charge image;

d) applying the liquid toner to the charge image to provide a toned image; and

e) transferring the toned image from the ~~charged~~ chargeable surface to the substrate surface.

33. (original) The method of claim 32, wherein the method is an electrostatic imaging method.

34. (original) The method of claim 32, wherein the method is an electrophotographic imaging method.